

TABLE S2, Related to Figure S4. Projections of Tac2⁺ cells in dBNSTa, DMH and CEA

| Injection region | Projection region | Density | % Total projection* |
|------------------|--|---------|---------------------|
| dBNSTa | Central amygdalar nucleus (CEA) | 0.0099 | 1.492312 |
| | Globus pallidus, internal segment (GPi) | 0.006 | 0.904432 |
| | Bed nuclei of the stria terminalis (BST) | 0.0065 | 0.979801 |
| | Bed nucleus of the anterior commissure (BAC) | 0.0374 | 5.637624 |
| | Subparafascicular nucleus, parvicellular part (SPFp) | 0.0371 | 5.592403 |
| | Reticular nucleus of the thalamus (RT) | 0.0077 | 1.160687 |
| | Vascular organ of the lamina terminalis (OV) | 0.0103 | 1.552608 |
| | Supramammillary nucleus (SUM) | 0.0058 | 0.874284 |
| | Tuberomammillary nucleus, ventral part (TMv) | 0.0076 | 1.145614 |
| | Paraventricular hypothalamic nucleus, descending division (PVHd) | 0.0066 | 0.994875 |
| | Lateral hypothalamic area (LHA) | 0.0082 | 1.236057 |
| | Lateral preoptic area (LPO) | 0.0236 | 3.557431 |
| | Preparasubthalamic nucleus (PST) | 0.0162 | 2.441966 |
| | Parasubthalamic nucleus (PSTN) | 0.0714 | 10.76274 |
| | Subthalamic nucleus (STN) | 0.0379 | 5.712994 |
| | Tubueral nucleus (TU) | 0.012 | 1.808863 |
| | Midbrain trigeminal nucleus (MEV) | 0.0124 | 1.869159 |
| | Ventral tegmental area (VTA) | 0.0176 | 2.653 |
| | Midbrain reticular nucleus, retrorubral area (RR) | 0.0205 | 3.090142 |
| | Midbrain reticular nucleus (MRN) | 0.0325 | 4.899005 |
| | Periaqueductal gray (PAG) | 0.0171 | 2.57763 |
| | Cuneiform nucleus (CUN) | 0.0092 | 1.386795 |
| | Edinger-Westphal nucleus (EW) | 0.0071 | 1.070244 |
| | Substantia nigra, compact part (SNc) | 0.0123 | 1.854085 |
| | Pedunculopontine nucleus (PPN) | 0.0239 | 3.602653 |
| | Rostral linear nucleus raphe (RL) | 0.0195 | 2.939403 |
| | Central linear nucleus raphe (CLI) | 0.0169 | 2.547483 |
| | Dorsal nucleus raphe (DR) | 0.0098 | 1.477238 |
| | Parabrachial nucleus (PB) | 0.006 | 0.904432 |
| | Barrington's nucleus (B) | 0.0084 | 1.266204 |
| | Supratrigeminal nucleus (SUT) | 0.0095 | 1.432017 |
| | External cuneate nucleus (ECU) | 0.0095 | 1.432017 |
| | Nucleus ambiguus (MB) | 0.0076 | 1.145614 |
| | Lateral reticular nucleus (LRN) | 0.0136 | 2.050045 |
| | Magnocellular reticular nucleus (MARN) | 0.0074 | 1.115466 |
| | Parvicellular reticular nucleus (PARN) | 0.0136 | 2.050045 |
| | Paragigantocellular reticular nucleus, lateral part (PGRNI) | | 1.009949 |
| | | 0.0067 | |

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| | Parapyramidal nucleus (PPY) | 0.01 | 1.507386 |
| | Nucleus raphe magnus (RM) | 0.0139 | 2.095267 |
| | Nucleus raphe pallidus (RPA) | 0.0198 | 2.984625 |
| | Nucleus raphe obscurus (RO) | 0.0161 | 2.426892 |
| DMH | Induseum griseum (IG) | 0.0007 | 2.991453 |
| | Hypothalamus (HY) | 0.0008 | 3.418803 |
| | Dorsal medial hypothalamus (DMH) | 0.0053 | 22.64957 |
| | Ventrolateral preoptic nucleus (VLPO) | 0.0005 | 2.136752 |
| | Supramammillary nucleus (SUM) | 0.0008 | 3.418803 |
| | Ventral tuberomammillary nucleus (TMv) | 0.001 | 4.273504 |
| | Dorsal premammillary nucleus (PMd) | 0.0028 | 11.96581 |
| | Ventral premammillary nucleus (PMv) | 0.0026 | 11.11111 |
| | Posterior hypothalamic nucleus (PH) | 0.005 | 21.36752 |
| | Lateral hypothalamic area (LHA) | 0.0011 | 4.700855 |
| | Parasubthalamic nucleus (PSTN) | 0.0007 | 2.991453 |
| | Tuberal nucleus (TU) | 0.0011 | 4.700855 |
| | Medulla (MY) | 0.0001 | 0.42735 |
| | Nucleus raphe pallidus (RPA) | 0.0009 | 3.846154 |
| CEA | Central amygdalar nucleus (CEA) | 0.0736 | 4.920115 |
| | Pallidum (PAL) | 0.0201 | 1.343673 |
| | Globus pallidus, internal segment (GPi) | 0.0363 | 2.426633 |
| | Substantia innominate (SI) | 0.0248 | 1.657865 |
| | Subparafascicular nucleus, magnocellular part (SPFm) | 0.021 | 1.403837 |
| | Subparafascicular nucleus, parvicellular part (SPFp) | 0.048 | 3.208771 |
| | Subparafascicular area (SPA) | 0.0238 | 1.591015 |
| | Peripeduncular nucleus (PP) | 0.0215 | 1.437262 |
| | Reticular nucleus of the thalamus (RT) | 0.0226 | 1.510796 |
| | Paraventricular hypothalamic nucleus, descending division (PVHd) | 0.0294 | 1.965372 |
| | Lateral hypothalamic area (LHA) | 0.0352 | 2.353098 |
| | Lateral preoptic area (LPO) | 0.0246 | 1.644495 |
| | Preparasubthalamic nucleus (PST) | 0.137 | 9.158366 |
| | Parasubthalamic nucleus (PSTN) | 0.103 | 6.885487 |
| | Subthalamic nucleus (STN) | 0.0544 | 3.636607 |
| | Zona incerta (ZI) | 0.0217 | 1.450632 |
| | Midbrain trigeminal nucleus (MEV) | 0.0411 | 2.74751 |
| | Ventral tegmental area (VTA) | 0.0382 | 2.553647 |
| | Midbrain reticular nucleus, retrorubral area (RR) | 0.0857 | 5.728993 |
| | Midbrain reticular nucleus (MRN) | 0.0471 | 3.148606 |
| | Periaqueductal gray (PAG) | 0.0293 | 1.958687 |
| | Edinger-Westphal nucleus (EW) | 0.0208 | 1.390467 |
| | Trochlear nucleus (IV) | 0.0348 | 2.326359 |

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| CEA | Substantia nigra, compact part (SNc) | 0.0678 | 4.532389 |
| | Pedunculopontine nucleus (PPN) | 0.0455 | 3.041647 |
| | Parabrachial nucleus (PB) | 0.028 | 1.871783 |
| | Pontine reticular nucleus, caudal part (PRNc) | 0.0207 | 1.383782 |
| | Supratrigeminal nucleus (SUT) | 0.0447 | 2.988168 |
| | Tegmental reticular nucleus (TRN) | 0.0203 | 1.357043 |
| | Accessory facial motor nucleus (ACVII) | 0.0435 | 2.907948 |
| | Inferior salivatory nucleus (ISN) | 0.0239 | 1.5977 |
| | Magnocellular reticular nucleus (MARN) | 0.0437 | 2.921318 |
| | Parvicellular reticular nucleus (PARN) | 0.0348 | 2.326359 |
| | Parapyramidal nucleus (PPY) | 0.0336 | 2.246139 |
| | Nucleus raphe magnus (RM) | 0.043 | 2.874524 |
| | Nucleus raphe pallidus (RPA) | 0.0242 | 1.617755 |
| | Nucleus raphe obscurus (RO) | 0.0282 | 1.885153 |

Data obtained from injection of Cre-dependent GFP-expressing AAV1 into indicated regions of Tac2-IRES-Cre mice; Mouse Connectivity Atlas, Allen Institute for Brain Science.

dBNST: Experiment #265138021; density cutoff: 0.0058

DMH: Experiment #300927483; density cutoff: 0.0005

CeA: Experiment #241279261; density cutoff: 0.02

*projection density % normalized to total density of unilateral projections for each injected region (above respective cutoffs).